

### Amendments to the Claims

1. **(Currently Amended)** A method of transmitting signals in a CDMA cellular radio transmission system, said method comprising ~~the following steps:~~

modulating a source signal with a channelization code having a length corresponding to a spreading factor to form a signal ~~intended~~ for transmission over a radio link;

~~characterized by~~

adapting the spreading factor for use in said modulating of the source signal ~~modulation step;~~  
and

transmitting the modulated signal and the spreading factor over the radio link.

2. **(Currently Amended)** The method according to claim 1, ~~characterized by the further~~  
comprising steps of

determining an ~~the~~ availability of channelization codes in the CDMA cellular radio  
transmission system, and

wherein said adapting of the spreading factor comprises adapting the spreading factor based  
on ~~on the basis of~~ the determined availability of channelization codes.

3. **(Canceled)**

4. **(Currently Amended)** The method according to claim 1, ~~characterized by the further~~  
comprising: steps of

encoding the source signal, prior to said modulating ~~modulation~~, with a forward error  
correction (FEC) code rate; and

adapting the FEC code rate.

5. **(Currently Amended)** The method according to claim 4, wherein said adapting of the  
FEC code rate comprises adapting ~~characterized in that~~ the FEC code rate ~~is adapted~~ in accordance  
with at least one of a ~~the~~ determined availability of channelization codes and ~~and/or~~ the adapted  
spreading factor.

6. **(Currently Amended)** The method according to claim 4, ~~characterized by the~~ wherein said transmitting further comprises step of signalling transmitting the adapted FEC code rate over the radio link.

7. **(Currently Amended)** The method according to claim 1, ~~wherein characterized in that~~ said adapting of the spreading factor comprises adapting ~~adaptation step for the spreading factor~~ and/or code rate is carried out in accordance with a measurement of at least one of the parameters of channel quality, interference, system capacity, transmit power and or link quality.

8. **(Currently Amended)** The method according to claim 7, further comprising reporting ~~the characterized in that said measurement is reported~~ from a receiver to a transmitter at least one of on request and and/or periodically.

9. **(Currently Amended)** The method according to claim 1, ~~wherein characterized in that~~ said adapting of the spreading factor comprises adapting ~~adaptation step for the spreading factor~~ and/or FEC code rate is carried out on an individual basis for at least one user of the CDMA cellular radio transmission system.

10. **(Currently Amended)** The method according to claim 1, ~~wherein characterized in that~~ said adapting of the spreading factor comprises adapting ~~adaptation step for the spreading factor~~ and/or FEC code rate is carried out based ~~on the basis of~~ a comparison of an estimated system parameter value calculated for a ~~the current code rate and/or spreading factor~~ with a predicted system parameter value calculated for ~~code rate and/or~~ a spreading factor after a potential change.

11. **(Currently Amended)** The method according to claim 1, ~~wherein characterized in that~~ said adapting of the spreading factor comprises adapting ~~adaptation step for the spreading factor~~ and/or FEC code rate is carried out in accordance with an adaptation of an ~~the~~ information bit rate of the source signal.

12. **(Currently Amended)** The method according to claim 1, wherein characterized in that said adapting of the spreading factor comprises adapting the ~~adaptation step~~ for spreading factor ~~and/or FEC code rate is carried out~~ in accordance with the properties of a retransmission algorithm.

13. **(Currently Amended)** A method of receiving signals in a CDMA cellular radio transmission system, said method comprising ~~the following steps~~:

receiving a modulated signal and a spreading factor transmitted over a radio link;;

~~characterized by~~

determining the spreading factor used in an adaptive manner for modulating the received signal;; and

demodulating the modulated received signals signal using the determined spreading factor with a channelization code having a length corresponding to the spreading factor.

14. **(Currently Amended)** The method according to claim 13, ~~characterized by the further steps of~~ comprising:

determining ~~a~~ the forward error correction (FEC) code rate used for encoding the received ~~signals~~ signal;; and

decoding the demodulated ~~signals~~ signal using the determined FEC code rate.

15. **(Currently Amended)** The method according to claim 13, wherein said receiving of the spreading factor comprises ~~characterized in that the determination step includes~~ receiving a transport format indicator indicating the spreading factor ~~and/or FEC code rate~~.

16. **(Currently Amended)** The method according to claim 15, wherein ~~characterized in that~~ said determining of the spreading factor comprises ~~determination step includes~~ demodulating the transport format indicator in advance and for each frame of the received signals signal.

17. **(Currently Amended)** A transmitter in a CDMA cellular radio transmission system, said transmitter comprising:

a modulator operable to modulate ~~modulation means (15) for modulating~~ a signal from a source (10) with a channelization code having a length corresponding to a spreading factor to form a signal ~~intended~~ for transmission over a radio link; and

characterized by

a control unit ~~operable to adapt (13) for adapting~~ the spreading factor for use in said ~~modulator modulation means (15)~~, operable to provide information on the spreading factor for a receiver, and operable to control transmission of the signal and the spreading factor to be transmitted over the radio link to the receiver.

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am. 18. **(Currently Amended)** The transmitter according to claim 17, wherein characterized in that said control unit is operable to receive (13) receives information on the availability of channelization codes in the CDMA cellular radio transmission system and ~~adapts~~ adapt the spreading factor based on the basis of said the information.

19. **(Canceled)**

20. **(Currently Amended)** The transmitter according to claim 18, ~~characterized by~~ further comprising a multiplexer operable to multiplex (14) for inserting a transport format indicator indicating the spreading factor with the signal from the source, the multiplexed signal being modulated by said modulator into the signal to be transmitted.

21. **(Currently Amended)** The transmitter according to claim 17, ~~characterized by~~ further comprising an encoder operable to encode (11) for encoding the signal from the source (10) with a forward error correction (FEC) code rate, wherein said and in that the control unit (13) adapts the FEC code rate.

22. **(Currently Amended)** The transmitter according to claim 17, ~~characterized by further comprising a source encoder (11) with multiple modes operable to encode the signal from the source, wherein said~~ which are adjustable by the control unit is operable to adjust said source encoder between the multiple modes (13).

23. **(Currently Amended)** The transmitter according to claim 17, wherein said control unit is operable to control ~~characterized by further comprising power control means (13) for controlling the transmit power in accordance with at least one of the adapted spreading factor and/or and a FEC code rate.~~

24. **(Currently Amended)** The transmitter according to claim 17, wherein ~~characterized in that said transmitter is embodied as a base station.~~

25. **(Currently Amended)** A receiver in a CDMA cellular radio transmission system, said receiver comprising:

a receiving unit operable to receive (17) for receiving a modulated signal and a spreading factor transmitted over a radio link;

~~characterized by~~

a control unit operable to determine means (19, 23) for determining the spreading factor used in an adaptive manner for modulating the received signal; and

a demodulator operable to demodulate (18) for demodulating the received ~~signals~~ signal using the determined spreading factor with a channelization code having a length corresponding to the spreading factor.

26. **(Currently Amended)** The receiver according to claim 25, wherein said control unit is operable to determine a ~~characterized by further comprising: means (19, 23) for determining the forward error correction (FEC) code rate used for encoding the received signal, and~~

said receiver further comprises a decoder operable to decode (21) for decoding the demodulated signal using the determined FEC code rate.

27. **(Currently Amended)** The receiver according to claim 25, wherein ~~characterized in that the means for determining include a control unit~~ said receiving unit is operable to receive (23) for receiving a transport format indicator indicating at least one of the spreading factor and/or the and a FEC code rate.

28. **(Currently Amended)** The receiver to claim 27, wherein said ~~characterized in that the control unit (23) is~~ operable adapted to demodulate the transport format indicator in advance and for each frame of the received signal.

29. **(Currently Amended)** The receiver according to claim 25, wherein ~~characterized in that~~ said receiver transmitter is embodied as a mobile station.

30. **(Canceled)**

31. **(Currently Amended)** The method according to claim 2, ~~characterized by the further steps of~~ comprising:

encoding the source signal, prior to said modulating of the source code modulation, with a forward error correction (FEC) code rate; and  
adapting the FEC code rate.

32. **(Currently Amended)** The method according to claim 5, ~~characterized by the further comprising step of signalling~~ transmitting the adapted FEC code rate over the radio link.

33. **(Currently Amended)** The method according to claim 14, further comprising ~~characterized in that the determination step includes~~ receiving a transport format indicator indicating the spreading factor and/or FEC code rate.

34. **(Currently Amended)** The transmitter according to claim 17 ~~19~~, ~~characterized by~~ further comprising a multiplexer operable to multiplex (14) ~~for inserting~~ a transport format indicator indicating the spreading factor with the signal from the source, the multiplexed signal being modulated by said modulator into the signal to be transmitted.

35. **(Currently Amended)** The transmitter according to claim 18, ~~characterized by~~ further comprising an encoder operable to encode (11) ~~for encoding~~ the signal from the source ~~(10)~~ with a forward error correction (FEC) code rate, wherein said ~~and in that the~~ control unit ~~(13)~~ adapts the FEC code rate.

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cont.  
36. **(Currently Amended)** The transmitter according to claim 18, ~~characterized by~~ further comprising a source encoder ~~(11)~~ with multiple modes operable to encode the signal from the source, wherein said ~~which are adjustable by the control unit~~ is operable to adjust said source encoder between the multiple modes (13).

37. **(Currently Amended)** The transmitter according to claim 18, wherein said control unit is operable to control ~~characterized by further comprising power control means (13) for controlling~~ the transmit power in accordance with at least one of the adapted spreading factor ~~and/or~~ and a FEC code rate.

38. **(Currently Amended)** The transmitter according to claim 18, wherein ~~characterized in that~~ said transmitter is embodied as a base station.

39. **(Currently Amended)** The receiver according to claim 26, wherein said ~~characterized in that the means for determining include a~~ control unit is operable to receive (23) ~~for receiving~~ a transport format indicator indicating at least one of the spreading factor and ~~and/or~~ the FEC code rate.

40. **(Currently Amended)** The receiver according to claim 26, wherein characterized in that said receiver transmitter is embodied as a mobile station.

41. **(New)** The method according to claim 4, wherein said adapting of the code rate comprises adapting the code rate in accordance with a measurement of at least one of parameters of channel quality, interference, system capacity, transmit power and link quality.

42. **(New)** The method according to claim 41, wherein said adapting of the spreading factor comprises adapting the spreading factor in accordance with a measurement of at least one of the parameters of channel quality, interference, system capacity, transmit power and link quality.

43. **(New)** The method according to claim 4, wherein said adapting of the code rate comprises adapting the code rate on an individual basis for at least one user of the CDMA cellular radio transmission system.

44. **(New)** The method according to claim 43, wherein said adapting of the spreading factor comprises adapting the spreading factor on an individual basis for at least one user of the CDMA cellular radio transmission system.

45. **(New)** The method according to claim 4, wherein said adapting of the code rate comprises adapting the code rate based on a comparison of an estimated system parameter value calculated for a current code rate with a predicted system parameter value calculated for a code rate after a potential change.

46. **(New)** The method according to claim 45, wherein said adapting of the spreading factor comprises adapting the spreading factor based on a comparison of an estimated system parameter value calculated for a current spreading factor with a predicted system parameter value calculated for a spreading factor after a potential change.



47. **(New)** The method according to claim 4, wherein said adapting of the code rate comprises adapting the code rate in accordance with an adaptation of an information bit rate of the source signal.

48. **(New)** The method according to claim 47, wherein said adapting of the spreading factor comprises adapting the spreading factor in accordance with the adaptation of the information bit rate of the source signal.

49. **(New)** The method according to claim 4, wherein said adapting of the code rate comprises adapting the code rate in accordance with properties of a retransmission algorithm.

50. **(New)** The method according to claim 49, wherein said adapting of the spreading factor comprises adapting the spreading factor in accordance with the properties of the retransmission algorithm.

51. **(New)** The method according to claim 33, wherein said receiving of the spreading factor comprises receiving the transport format indicator indicating the spreading factor and the FEC code rate.

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